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A List of Water Birds of Lake Valley, Central Sierra Nevada Mountains, California.

BY MILTON S. RAY.

WHILE the land birds of this region have been fully treated by Chester Barlow in *THE CONDOR* (Vol. III, No 6) and by Wilfred Osgood and other writers in various magazines, little or nothing has been written regarding the water birds. I have spent two seasons in the valley, from June 4 to June 20, 1901, and from June 16 to July 3, 1902. My brother, William R. Ray, has accompanied me and in 1902 Olof Heinemann joined us.

The principal resort of the water birds is the marsh extending along the shore of Lake Tahoe between Rowlands and Tallac for about three miles and from one to three miles inland. They are also found sparingly, however, on Lake Tahoe and other adjacent lakes, and in the various meadows and along the numerous streams of Lake Valley. Most collectors have been prevented from working the marsh at Rowlands thoroughly owing to deep water, impenetrable tule-thickets and impassable patches of pond lilies. While inaccessible to a row-boat, we overcame these difficulties with a light portable canvas canoe which we used both years. This enabled us to go over the shallowest water or lily-beds with ease and thru the thick tules with some little difficulty.

Thanks are due Mr. Leverett M. Loomis for identifying a number of skins taken. Starred (*) species were collected.

Colymbus californicus. American Eared Grebe.* The grebe is a very rare bird about Lake Tahoe. None were observed in 1901, although many days were spent in the marsh at Rowlands. On June 29, 1902, a nest was found in the above marsh in about six feet of water among a sparse patch of tules. It was a floating mass of decayed vegetation and fastened to the reeds, and contained four well stained and almost fresh eggs.

Larus californicus. California Gull. This gull in all states of plumage is abundant on the lake about Rowlands but does not breed. On every visit immense flocks would lazily raise from the sand bar at the mouth of the river as we entered.

Sterna forsteri. Forster Tern.* Very common about Rowlands marsh where it nests in colonies of a dozen pairs or more. When the nesting grounds were approached the terns would fly up and hover about us, uttering their discordant cries, and some would dart uncomfortably close to our heads. The nests were built in various situations. The majority were built up of dry tules where the water is about five feet deep. When freshly built of green tules the nest formed a pretty picture. They were placed among tall thick tules or marsh grass and pond-lilies at their edge. Great difference existed in the nests, some being elaborate structures, while others were scantily made and placed on soggy masses of dead tules or floating logs. Numerous eggs were observed floating in the water about the nesting grounds and in a large number of sets taken the eggs were added. A little before the first of June these terns start nest building, and fresh and partly incubated eggs were found all through the month. Even on my latest trip to the marsh, June 29, 1902, I did not observe any young of *forsteri*. The nests contained either one, two or three eggs and in about one hundred nests examined in 1901 and 1902, only one contained more, namely, five eggs. While the style of marking varies greatly, the ground color of brownish-drab and the blotches of brown, umber and lilac remain about the same. A single exception was a set

of three eggs, in which the ground color is pale green. An abundant fish in the marsh called "chubs" is the principal food of these birds, and they may be seen all over the marsh restlessly flying back and forth or hovering and dropping with a sudden splash after their prey.

Hydrochelidon surinamensis. Black Tern. This tern is even commoner than the preceding species. Occasionally substantial nests of tules in deep water like those of *forsteri* were found, but nearly all were scantily or carelessly made of fine tules and marsh grass and placed on floating driftwood in a foot or so of water. Like *forsteri* this bird usually lays one, two, or three eggs, but a single set of four were found. It nests a little earlier than Foster tern, small young being rather common at the end of June. The birds breed in colonies, from ten to twenty nests



PHOTO BY O. HEINEMANN.

NEST OF THE MALLARD.

being found together. A single specimen of a tern with a white breast not larger than *surinamensis* was seen, but we were unsuccessful in our attempts to secure it.

Pelecanus erythrorhynchos. American White Pelican.* Abundant about Rowlands marsh but does not breed. I also noticed large flocks about the numerous mountain lakes in Desolation Valley (altitude about 8000 feet). By the protuberance on the bill the males can be distinguished for quite a distance.

Merganser serrator. Red-breasted Merganser. Recorded as a winter visitant at Lake Tahoe in Grinnell's "Check-list of California Birds."

Anas boschas. Mallard. By far the commonest duck about the marsh. Also numerous along the various streams and marshy meadows. The majority breed in May as several dead ducklings were seen and numerous nests were found, in

clumps of willows or among the wiry grass on sand-spits, profusely lined with down, containing egg shells.

Querquedula cyanoptera. Cinnamon Teal.* The teal is scarce. I found a single nest on June 19, 1902, containing four nearly fresh eggs. It was simply a hollow without any lining, on high ground in the marsh among tall grass.

Aix sponsa. Wood Duck. On nearly every visit to Rowlands I have noticed a single individual and young of this beautiful duck off the mouth of the river.

Aythya collaris. Ring-neck Duck. Recorded from Lake Tahoe in mid-winter in Check-list of California Birds. The above list of ducks could probably be trebled by observations in fall, winter, and spring.

Botaurus lentiginosus. American Bittern. A single specimen of this bird was seen on June 29, 1902, when it flew up a few feet from the canoe, in the tall grass where it had been feeding, but on every trip to the marsh or the vicinity the peculiar booming noise was heard.

Ardea herodias. Great Blue Heron. Noticed occasionally about Rowlands in June 1901 and 1902.

Fulica americana. American Coot. During June, 1901, this bird was common all over the reedy parts of the marsh nesting both in tall thick tules and among sparse reeds in almost open water where the nest could be seen for quite a distance. Some nesting records in 1901 are as follows: June 8, 9 eggs, incubation advanced; 7 eggs, incubation, one half; June 12, 8 eggs incubation begun, 7 eggs incubation advanced; one nest with young just emerging from the shell. Strange to say I did not see one of the birds in 1902.

Steganopus tricolor. Wilson Phalarope.* Rather common both about Rowlands and the marshy meadows near Bijou where two pairs had nests about the middle of June, 1902. They could not be located however, even with the aid of a field glass owing to the character of the country and the marvelous hearing and sight these birds possess. On June 14, 1901, I shot a female of this species for identification, and it was pitiful to see how her mate would not forsake the spot but continued circling around uttering its mournful and almost human cry. These birds were seen in flocks of half a dozen or more and also single pairs during June, and I am almost positive I observed a pair with young early in June, 1901, thus showing that the breeding season extends from May to July.

Actitis macularia. Spotted Sandpiper. Common about Rowlands as well as along the lake shore, various streams in the valley and numerous meadows. A nest, June 9, 1901, at Rowlands, among wiry marsh grass contained four fresh eggs, and one June 17, 1901, in the same location contained a like complement, also fresh, and curiously enough but half a foot away was a nest of the Killdeer with three eggs. One nest June 26, 1902, was found near Bijou by watching the birds from a distance with a field glass. It contained four eggs too far advanced in incubation to be of value.

Ægialitis vocifera. Killdeer. The killdeer frequents the same localities as *Actitis macularia* and is very abundant. Owing to the perception of these birds, however, the nests are not easily found unless considerable time is spent. A nest, a hollow scooped in the bare shingle on the lake shore at Rowlands on June 11, 1901, contained three fresh eggs, and one in a similar situation on June 22, 1902, contained the same number in the same condition.